

Introduction to Water Quality Standards

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Topics for Today's Presentation

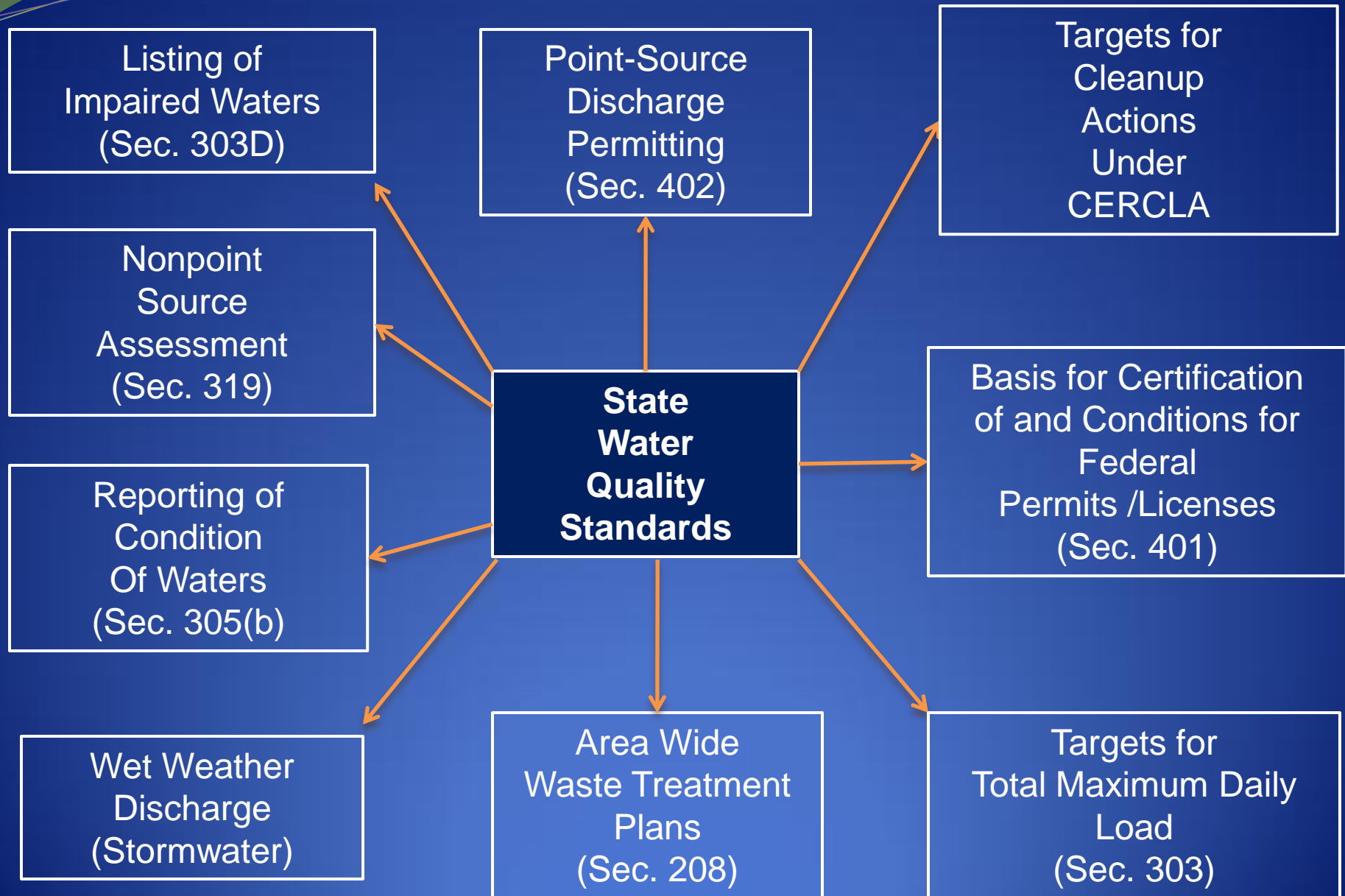
- What are Water Quality Standards
- Designated Uses
- Water Quality Criteria
- Antidegradation
- General Policies

The Clean Water Act

- Objective: Restore and maintain the chemical, physical, and biological integrity of the nation's waters (Sec. 101(a))
- Interim Goal: “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water” wherever attainable (Sec. 101(a)(2))

CWA: Two Approaches to Pollution Control

- A Technology-Based Approach, based on the performance of treatment and control technologies
- A Water Quality-Based Approach, based on meeting a designated use for a waterbody



Water Quality Standards

Water Quality Standards:

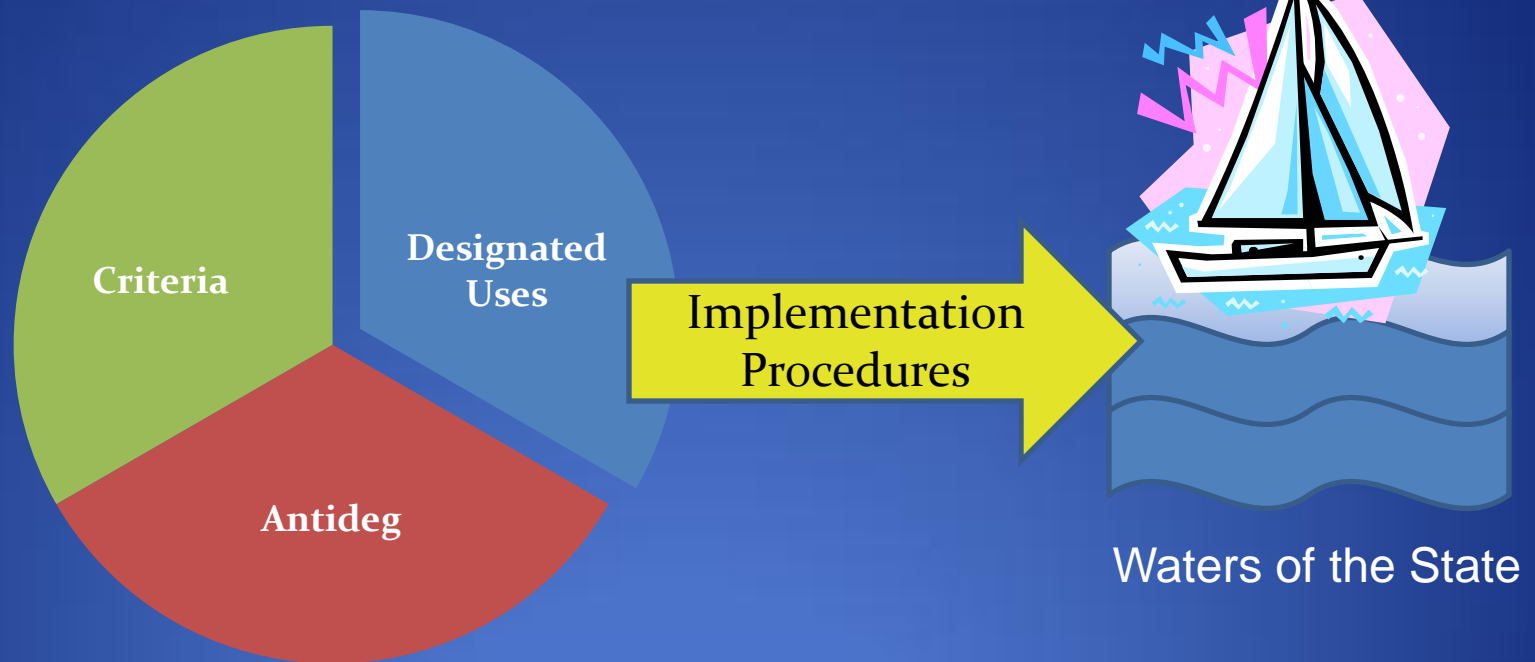
- Establish water quality goals for a waterbody
- Provide a regulatory basis for controls beyond technology-based limits

Water Quality Standards

Provisions of State/Federal Law:

- **Designated Uses (62-302.400 FAC, 40 CFR 131.10)**
- **Criteria to protect those uses (62-302.500, 530 & 540 FAC, 40 CFR 131.11)**
- **Antidegradation (62-302.300 & 62-4.242 FAC, 40 CFR 131.12)**
- **General Policies (62-302.300 FAC, 40 CFR 131.13)**

Water Quality Standards: Designated Uses



Designated Uses: Definition

40 CFR 131.3(f)

Regulatory:

- **Those uses specified in state water quality standards regulations for each waterbody or segment, whether or not they are being attained**

Plain language:

- **A concise statement of management objectives and expectations for each of the individual surface waters under state jurisdiction**

Designated Uses: Direction to States

40 CFR 131.10

Each state must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation.

In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.

Designated Uses: State of Florida 62-302.400 FAC

All surface waters of the State have been classified according to designated uses as follows:

- CLASS I Potable Water Supplies**
- CLASS II Shellfish Propagation or Harvesting**
- CLASS III Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife**
- CLASS IV Agricultural Water Supplies**
- CLASS V Navigation, Utility and Industrial Use**

Designated Uses: Class I Lake Okeechobee



Designated Uses: Class II Florida Bay



Designated Uses: Class II Marshes



Designated Uses: Class III Canals



Designated Uses: Class IV EAA Canals

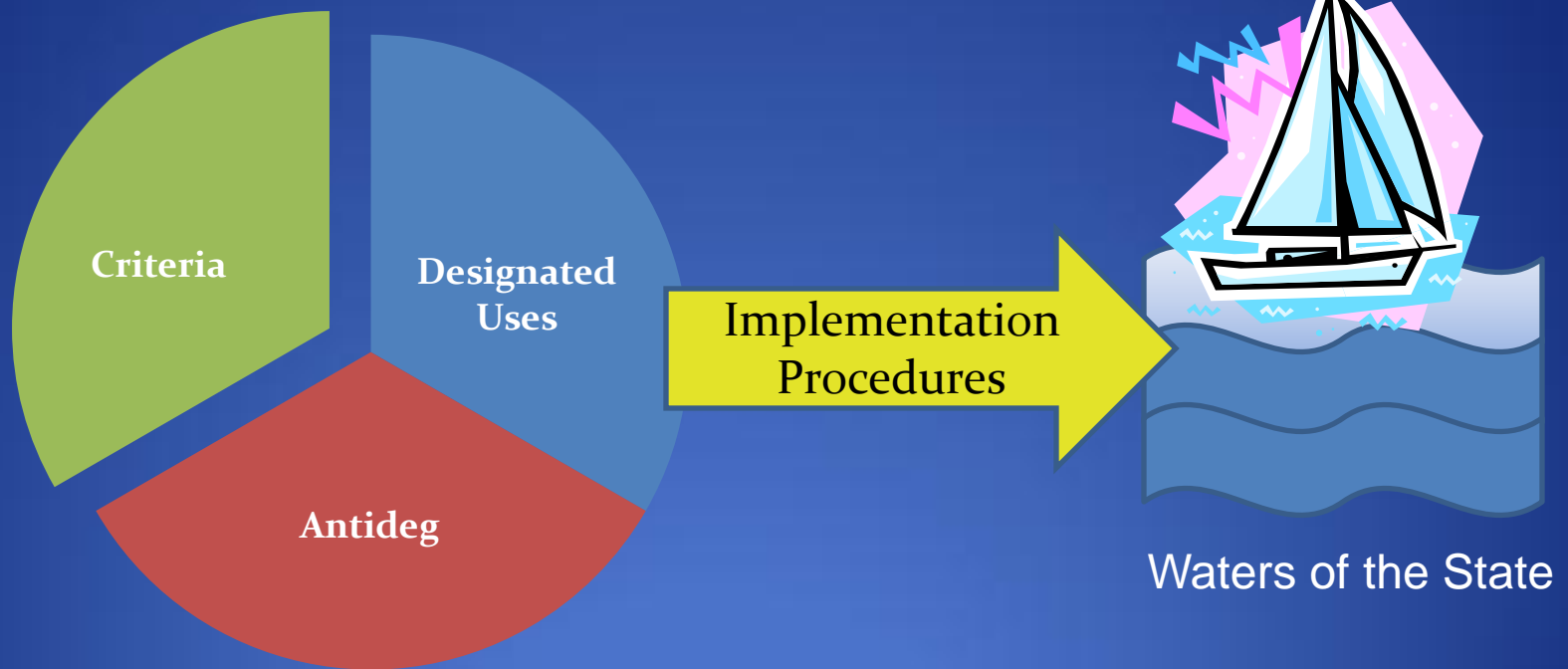


Designated Uses: Class IV EAA Canals

All secondary and tertiary canals wholly within agricultural areas are classified as Class IV.

“Secondary and tertiary canals” shall mean any wholly artificial canal or ditch which is behind a control structure and which is part of a water control system that is connected to the works of a water management district and is permitted by such water management district.

Water Quality Standards: Criteria



Water Quality Criteria

Federal law provides that states “must adopt those *water quality criteria* that protect the designated use. Such criteria must be based on sound scientific rationale” 40 C.F.R. 131.11.

Stated differently, criteria represent the water quality necessary to support a particular use and are expressed as constituent concentrations, levels or narrative statements.

Water Quality Criteria – Two Broad Categories

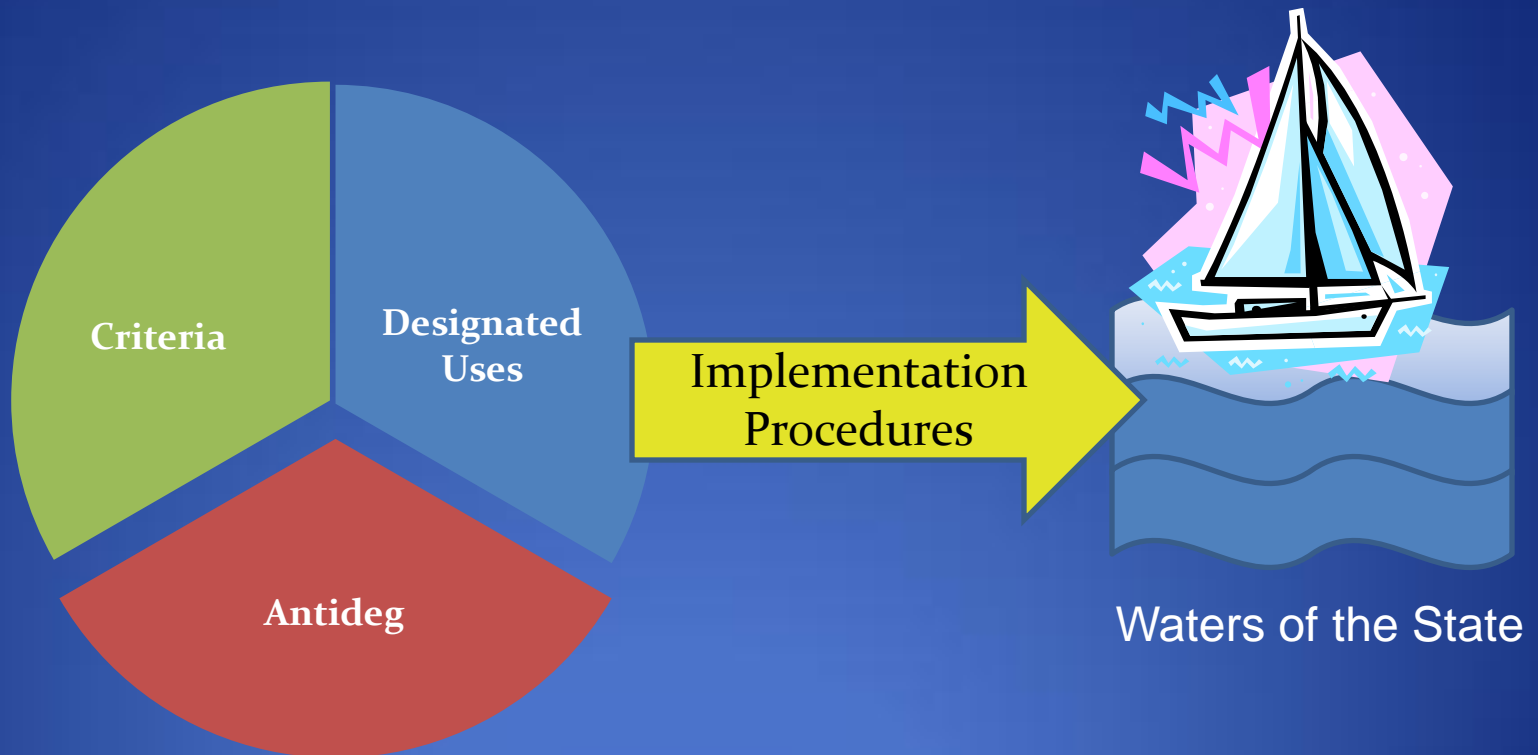
- Human Health Criteria
 - PCBs, Mercury, Pathogens (bacteria), Pesticides
- Aquatic Life Criteria
 - Metals, Dissolved Oxygen, pH, Conductivity, Nutrients, Biological Diversity (Shannon Weaver), etc
- Majority of Florida's criteria are expressed as the maximum not to be exceeded at any time

Water Quality Criteria – Nutrients

Everglades Phosphorus Rule

- First Numeric Nutrient Criteria for the State of Florida
- Over a decade worth of research
- ~ 2 years of rulemaking hearings – adopted 2003
- Months of negotiation with EPA on approval
- Federal court approval of criterion and measurement methodology but still ongoing challenges to EPA approval of P Rule
- Criterion is very stringent = 10 ppb

Water Quality Standards: Antidegradation



Antidegradation Requirements (40 CFR 131.12)

States must develop and adopt a statewide antidegradation policy to protect:

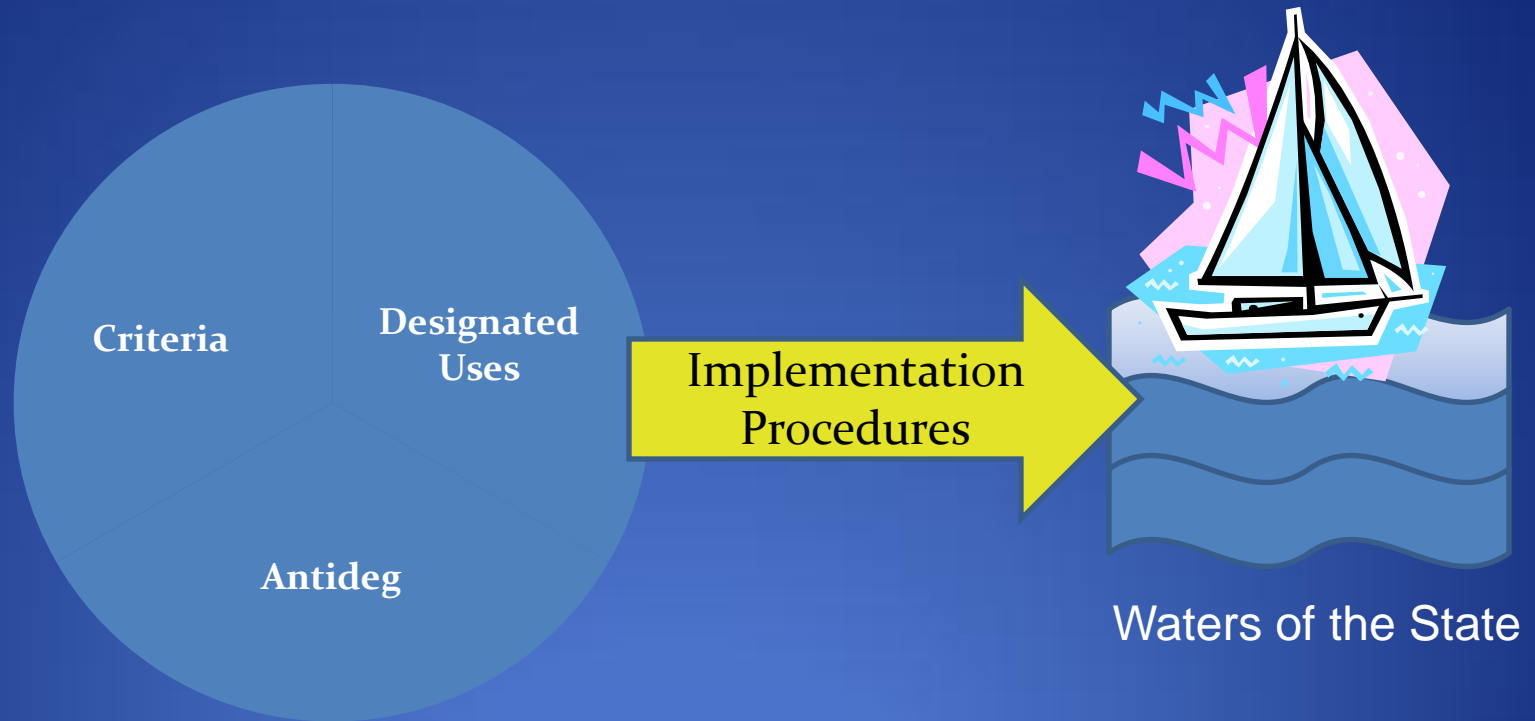
- existing in-stream uses for all waters of the U.S.
- water quality that is better than the levels necessary to support propagation of fish, shellfish and wildlife and recreation in and on the waters (CWA 101(a) goals)

Antidegradation Requirements Florida's Policy

Florida's antidegradation policy is implemented through its regulatory/permitting program such that:

- Pollution which causes or contributes to new water quality violations is prohibited.**
- Discharges that reduce the quality of receiving waters below the classification established for them is prohibited**
- Any degradation from a discharge must be determined to be desirable and in the public interest.**

Water Quality Standards: General Policies



General Policies (40 CFR 131.13)

States may include in their standards, policies affecting application and implementation, such as:

- Mixing Zones
- Low flows
- Variances
- These policies are subject to EPA review and approval